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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/343,093	06/30/1999	SHOSH KATAYAMA	862.2907	7483

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EXAMINER

NATIVIDAD, PHILIP SANA

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/343,093

Applicant(s)

KATAYAMA, SHOSHI

Examiner

Phil Natividad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 27-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 27-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 24 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27, 36, and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogushi. In Fig. 5, Ogushi discloses image sensing system (504)(510). In Fig. 1, Ogushi discloses measurement system (106). Arithmetic section (110) calculates the target position (as well as positional deviations therefrom). Fig. 5 does not expressly disclose both systems in one embodiment; however, it would have been obvious to one of ordinary skill in the art to use both in one embodiment for motivation of high precision (col. 5 line 33 and Fig. 7).

Response to arguments: Alternatively, Fig. 7 discloses an embodiment with both systems; contrary to applicant's argument that they are merely for error shot discrimination between reticle and wafer, it would have been obvious to one of ordinary skill in the art that with the reticle stationary both systems would measure just the movement of the stage thus meeting applicant's claimed limitations.

3. Claims 28-35 and 37-46 are rejected under 35 U.S.C. 103(a) as unpatentable over Ogushi. As to claims 28 and 37, note col. 1 lines 54-55 and col. 5 lines 17-20. As to claims 29 and 38, note col. 1 lines 50-52 et al. As to claims 30 and 39, note col. 5 lines 14-15 and Figs. 2A-2B. As to claims 31 and 40, note col. 3 line 20. As to claims 32 and 41, Ogushi does not

expressly disclose an interferometer, but it is notoriously well known in this art to use an interferometer, of which Official Notice is taken, for motivation of high measurement precision. As to claims 33-34 and 42-43, a plurality of areas on one wafer/substrate, and real-time aligning/position-measuring during exposure/photolithography of each area, are notoriously well known in this art, for motivation of higher yield of finished products from each wafer. As to claims 35 and 44, it would have been obvious to one of ordinary skill in the art to make stage movement speed constant for a motivation of better synchronization/less dispersion to minimize registration errors/maximize lithography resolution (col. 1 lines 61-63). As to claims 45-46, note col. 1, col. 2 lines 27-30 and furthermore it is well-known to select/discriminate an operating mode (e.g., error vs. normal) upon making a measurement, of which Official Notice is taken.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner can be directed to Phil Natividad whose telephone number is 703-306-5944. The examiner can normally be reached on Tuesday through Friday and alternating Mondays; and supervising patent examiner Frank G. Font can be reached at 703-308-4881.

In view of delays in mail delivery in recent days, we at the USPTO would like to encourage you to communicate with the USPTO via facsimile. Facsimile transmissions may be used for correspondence as set forth in 37 CFR 1.6 such as: amendments, petitions for extension of time, authorization to charge a deposit account, an IDS, terminal disclaimers, a notice of appeal, an appeal brief, CPAs under 37 CFR 1.53(d), and RCEs.


PTO Form 2038 should be used when authorizing payment by credit card; this form is maintained separate from the file to ensure confidentiality.

The USPTO has recently installed server software that enables us to automatically receive facsimile transmissions and route them to the appropriate groups. No special equipment is needed by our customers to use this system other than a regular facsimile machine. Each Technology Center has its own facsimile numbers associated with our server for Official replies to non-final Office actions and for Official replies to final Office actions. In addition, each Technology Center has a Customer Service Center on our server system, and can answer any general application status questions you might have, can provide Examiner information, and answer paper queries.

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The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 or 703-308-7722 for regular communications and 703-872-9319 or 703-308-7722 for After Final communications.

Tech Center 2800 Customer Service is at 703-306-3329 or 703-872-9317. Any inquiry of a general nature or relating to the status of this application or proceeding can also be directed to the receptionist whose telephone number is 703-308-0956.


Phil Natividad
Patent Examiner
psn
May 15, 2003


FRANK G. FONT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800